SPIRIT WIC SYSTEM

OPERATIONS MANUAL

CSC

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Document Information

Document Information	
Document Title	Operations Manual
Document Subject	SPIRIT WIC System
Document Version	2.0
Software Version	2.19
Author	The SPIRIT Team
Document Creation Date	07/10/2013
Document Current Version Date	09/19/2013 3:11 PM
Purpose of Document	This document describes the system components, communications, software updates, system backup system maintenance, system recovery, site operations, mail merge templates, and end of day and end of month processes.

Document Revision History

Document Revision History			
Version	**Date**	**Author**	**Description**
1.0	07/10/2013	The SPIRIT Team	Initial Document
2.0	09/16/2013	The SPIRIT Team	Incorporate ENH-318 Notes_CSC Response rev 1.doc changes

Table of Contents

Operations Manual

This document provides operational information to facilitate the installation, support, and maintenance of the SPIRIT WIC System, henceforth referred to as SPIRIT. Information about and usage of SPIRIT is located in the current SPIRIT Detailed Functional Design Document (DFDD).

This manual does not include information related to disaster recovery. Disaster recovery is unique to each WIC program.

1. SPIRIT WIC SYSTEM OVERVIEW

The SPIRIT State Agency Model (SAM) supports WIC program operations and management functions, such as certifying applicants, monitoring food vendors, tracking participation and expenditures, and managing appointments. SPIRIT supports the overall goal of providing quality service to women, infants, and children participating in the WIC program.

The system was developed using .NET Smart Client technology centered on a Service Oriented Architecture (SOA) with SQL server database management. This SOA is implemented using Microsoft Web Services. The hosting Information Technology (IT) department will be required to utilize published Web services.

The user interface is implemented as a number of Windows Forms. Applications share information using .NET remoting for interprocess communication to support single login access to the system.

2. SPIRIT WIC SYSTEM COMPONENTS

SPIRIT consists of the following high-level components:

- Application Server (i.e., End of Day/End of Month Server)
- Web Server(s)
- Central Database Server(s)
- ACM Laptop Servers
- Client Workstations
- Peripherals

The recommendations below provide minimum specifications that are certified with SPIRIT. Manufacturers are provided, however they are not required. Research is required by the Hosting Data Center to determine equivalent server specifications at the time of implementation.

2.1. Application Server Recommendations

- IBM 3550 M3 or equivalent server with 1 x Six Core
- 16 GB RAM (minimum)
- MS SQL Server 2008 Enterprise Edition Service Pack 2
- Crystal Reports Basic Runtime for Visual Studio 2008 (10.5.0.0)
- Microsoft® Excel Professional 2007

2.2. Web Server Recommendations

- IBM 3550 M3 or equivalent server with 1 x Six Core
- 16 GB RAM (minimum)
- Windows Web Server 2008

2.3. Central Database Server Recommendations

- IBM 3650 M3 or compatible server with 1 x Six Core
- 32 GB RAM (minimum)
- Windows Server 2008 R2 Enterprise Edition Service Pack 1
- MS SQL Server 2008 Enterprise Edition Service Pack 2

2.4. Client Workstation Recommendations

- Intel® Core™ i3-330M 2.13 GHz CPU or equivalent
- 4 GB RAM (minimum)
- 160 GB Hard Drive (minimum)
- CD-RW/DVD
- 10/100/1000 Ethernet
- Windows XP Professional or Windows 7 (SPIRIT version 2.17.07 or higher)
- .Net Framework 3.5 SP1
- Crystal Reports Basic Runtime for Visual Studio 2008 (10.5.0.0)
- Microsoft® Office Professional 2007
- Adobe Reader

2.5. Compatible Peripherals

2.5.1. Signature Pads

- Topaz SignatureGem LCD 4x3 T-LBK755-BHSB-R

- Topaz SignatureGem LCD 4x5 T-LBK766-BHSB-R
- Topaz SignatureGem LCD 4x5 T-LBK766SE-BHSB-R

2.5.2. Printers

- Source Technologies MICR printers
  - ST-9510, ST-9512, ST-9530, ST-9612, ST-9620, ST-9712
- Non MICR printers
  - Xerox Phaser 8400 DN, 8500 DN, 8560 DN, HP P2055 DN
- HP LaserJet P2035n

2.5.3. Scanners

- Zerox 7600
- Pentax DSmobile 600
- HP ScanJet G4010 Flatbed Scanner
- HP ScanJet 5590
- Canon CanoScan 5600F Color Image Scanner
- Canon Canoscan LiDe 600F Flatbed Scanner
- LS2208 Handheld Motorola Symbol Barcode Scanner

2.5.4. EBT Card Scanners

- ID Tech IDMB-334133

2.5.5. Scales

- Easy Weigh PX-30+ (for Direct Distribution)
- Easy Weigh PX-60+ (for Direct Distribution)

3. COMMUNICATIONS OVERVIEW

This section documents the communication set up between system components.

3.1. Communication with the Database Server

The web servers and the Application Server (End of Day & End of Month processing) communicate with the Database Server (Microsoft® SQL Server) on TCP port 1433. The firewall must have port 1433 on the Database Server open to allow this communication. If the Database Server does not use the default port (1433) then the firewall should allow communication on the custom port.

3.2. Communication between Web Servers and Client Workstations

All communication between client workstations and the web servers will use Web Services over TCP port 443. SSL certification is recommended for the communication process.

3.3. Ports used on Client Machines

The ports 9090, 9091, and 9092 are used in the SPIRIT WIC System for inter process communication to provide the single logon functionality. These ports should not be used by any other applications installed on the client machine.

4. INITIAL INSTALLATION

This section addresses the installation of SPIRIT. The subsections include general information and references to the installation documents for the Database Servers, web servers, Application Servers, and client workstations.

Unique configuration, installation, and set-up may be necessary based on the following:

- Equipment purchased
- Equipment location/hosting
- Local networking and IT requirements
- Local policies and procedures

NOTE: If network and IT processes require setup or file structures different from the SPIRIT recommended setup, the differences should be documented to facilitate maintenance.

4.1. Database Server Install

The installation process for a SPIRIT Database Server has been automated. Use of the automated installation file has been documented in detail in the *SPIRIT WIC Database Server Installation Guide*. Please refer to the installation guide for assistance in the use of the *DatabaseServer.exe* file.

4.2. Web Server Install

The installation process for a SPIRIT Web Server has been automated. Use of the automated installation file has been documented in detail in the *SPIRIT WIC Web Server Installation Guide*. Please refer to the installation guide for assistance in the use of the *WebServer.exe* file.

4.3. Application Server Install

The installation process for a SPIRIT Application Server has been automated. Use of the automated installation file has been documented in detail in the *SPIRIT WIC Application Server Installation Guide*. Please refer to the installation guide for assistance in the use of the *ApplicationServer.exe* file.

NOTE: The SPIRIT Application Server is also known as the End of Day (EOD) server and the End of Month (EOM) server.

4.4. Client Workstation Install

The installation process for a SPIRIT client has been documented in detail in the *SPIRIT WIC Client Installation Guide*. Please refer to the installation guide for assistance with any stage of the process.

5. APPLYING SOFTWARE UPDATES

5.1. Web Server

New software releases must be installed on every SPIRIT Web Server supporting a particular environment. For example, if production is supported by three (3) Web Servers, then the new release must be installed on all three (3) Web Servers. Complete updates by running the install separately on each server.

To prevent the need to modify the following files after a new release is installed, save a copy of each file in a secure location prior the installation:

- Customized templates (For information about customized templates, refer to Section 11.3 – Deploying Customized Templates to the Web Server(s)).
- …\Web Server CD\install.config

5.1.1. Web Server Updates

Complete the following steps to install the update file:

1. Copy the *WebServerCD.zip* file for the new release to the preferred drive on the first server and unzip it.
2. Replace the *install.config* file in the new release *Web Server CD* folder with the saved *install.config* file.
3. Copy the customized templates into the *\WebserverCD\ClientUpdate\Update* folder. (Replace existing files as necessary.)
4. Modify the new release *UpdateManifest.xml* file to ensure the customized templates are downloaded to the *Templates* folder on the client computers.
    a. Search for each customized template by name and update the following information with the information from the customized template file:
        i. Replace the *Size* value with the customized template file's size in bytes: (e.g., "<Size>22016</Size>")
        ii. Update the *LocalFileName* value to replace *TemplatesBase* with *Templates*. (e.g. "<LocalFileName>Templates\CertNotice.doc</LocalFileName>")
        iii. Replace the *LastUpdatedOn* value with the customized template file's modified date: (e.g., "<LastUpdatedOn>2011-07-06T14:40:38-05:00</LastUpdatedOn>")

IMPORTANT: Ensure the *LocalFileName* value in the *UpdateManifest.xml* identifies the *Templates* folder in the file path. (e.g., <LocalFileName>Templates\CertNotice.doc</LocalFileName>)

5. Stop the IIS application pools for the target websites on each of the Web Servers supporting the target environment(s).

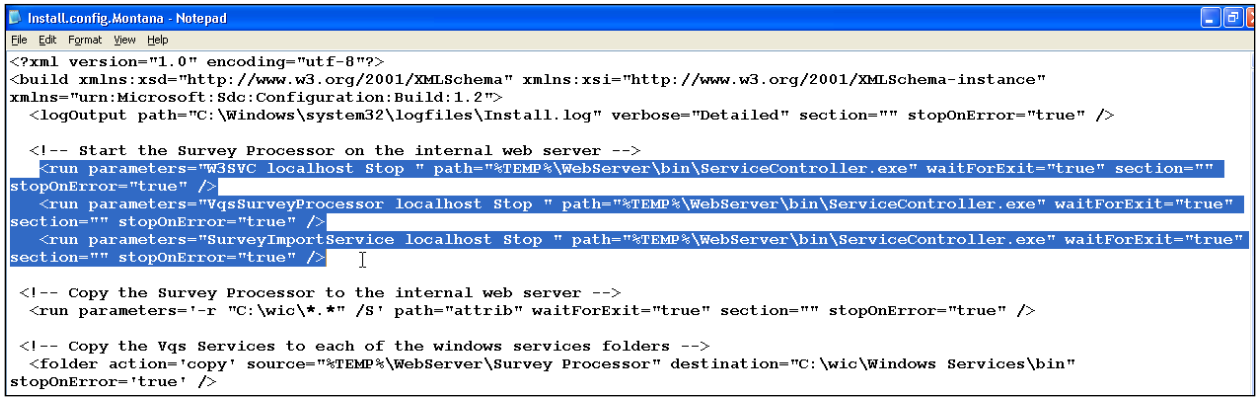

Figure 5-1 – Install.config rows that shut down entire server

NOTE: The 3 rows highlighted in Figure 5-1 shut down the entire Web service for all websites on the server. If the installation is for the Test environment and it shares the same server as the Production environment, the Production environment will be taken down when the installation occurs for the Test environment. Therefore, these 3 lines should be commented out if multiple environments are housed on the same server.

6. Double-click *Install.cmd* to install the new release.
   OR
   Right-click *Install.cmd* and select **Open**.
   OR
   Right-click *Install.cmd* and select **Run as Administrator** to complete installation.

If multiple Web Servers support the environment being updated, the above steps should be completed on each Web Server.

5.2. Application Server

Because the Application Server is also the End of Day (EOD) and End of Month (EOM) server, it must be on the same version of the software as the Web Server(s) to ensure that EOD and EOM processes are synchronized with the SPIRIT database.

5.2.1. Application Server Updates

Complete the following steps to update the Application Server:

1. Copy the *Application Server CD.zip* for the new release to the preferred drive on the Application Server and unzip it.

2. Click **Start** on the Windows® Task Bar to display the **Start** menu.

3. Click **Control Panel** on the **Start** menu.

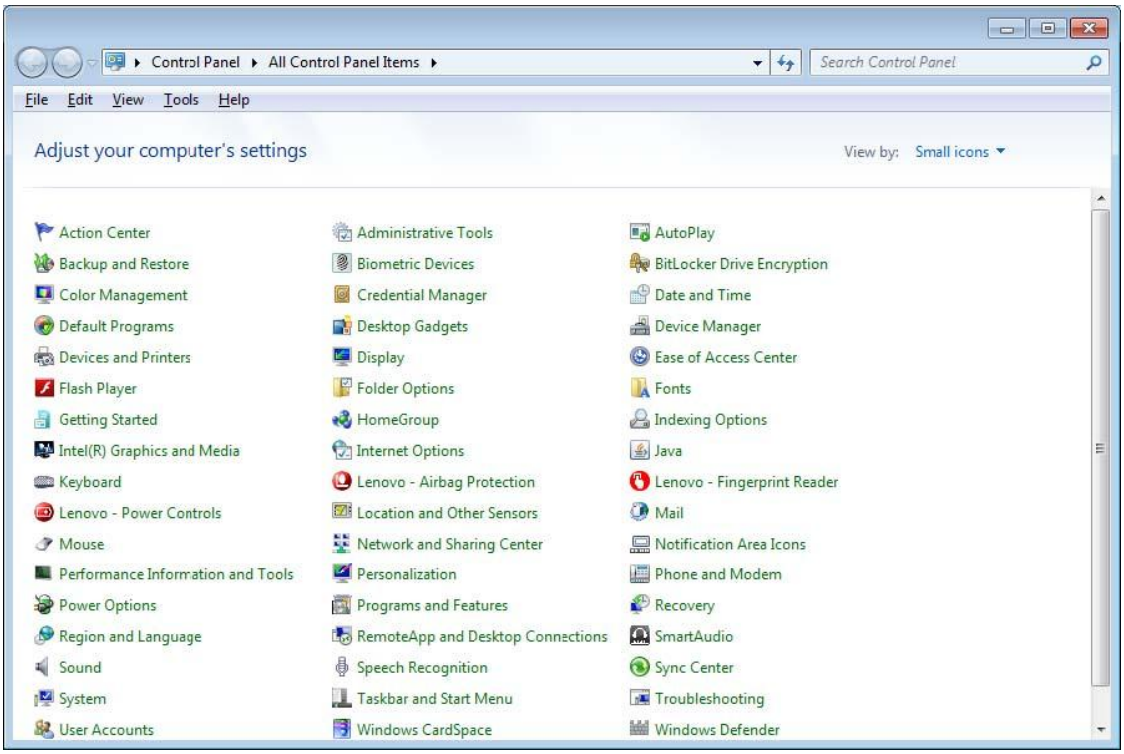

Figure 5-2 – Control Panel Screen

The *Control Panel* screen displays.

4. Click **Programs and Features**.

The *Programs and Features* screen displays.

5. Locate and select *WIC* in the list.
6. Click the **Uninstall** button. A confirmation dialog displays.
7. Click the **Yes** button.

The system begins uninstalling *WIC*. When the uninstallation is complete, keyboard focus is returned to the *Programs and Features* screen and *WIC* is removed from the list.

8. Close the *Programs and Features* screen.
9. Open the *Application Server CD* folder for the new release.
10. Double-click the *Server.msi*.

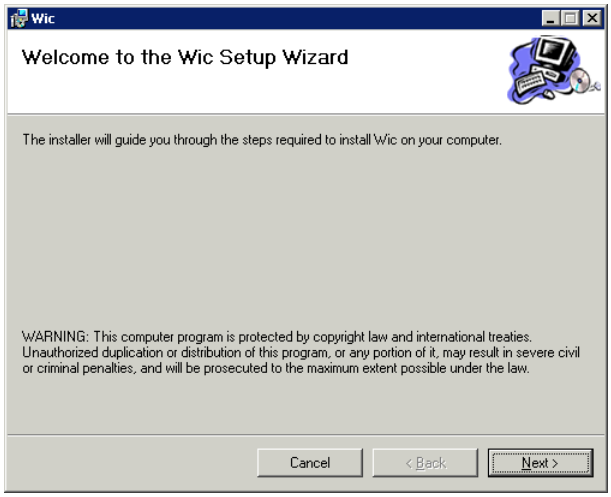

Figure 5-3 – Welcome Screen

The *Welcome* screen of the *WIC Setup Wizard* displays.

11. Click **Next**.

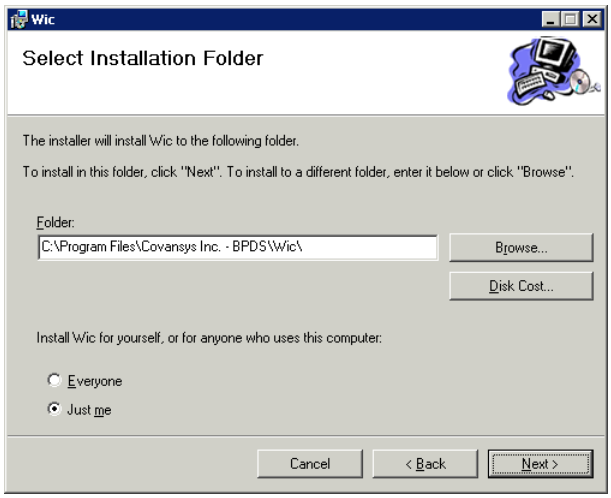

Figure 5-4 – Select Installation Folder Screen

The *Select Installation Folder* screen of the *WIC Setup Wizard* displays.

12. Verify the installation **Folder** path is correct.
13. Select the **Everyone** option.
14. Click **Next**.

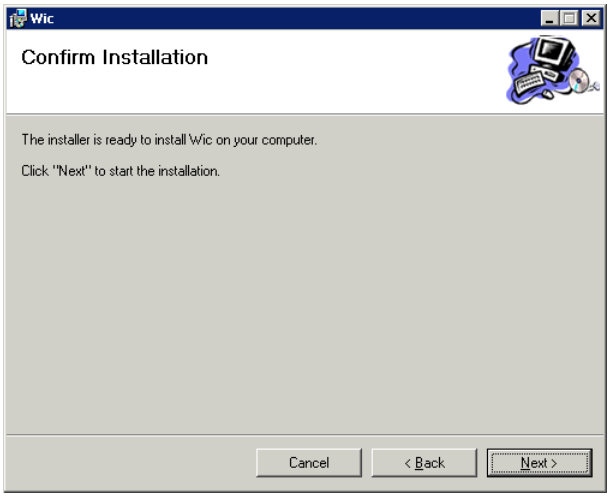

Figure 5-5 – Confirm Installation Screen

The *Confirm Installation* screen of the *WIC Setup Wizard* displays.

15. Click **Next**.

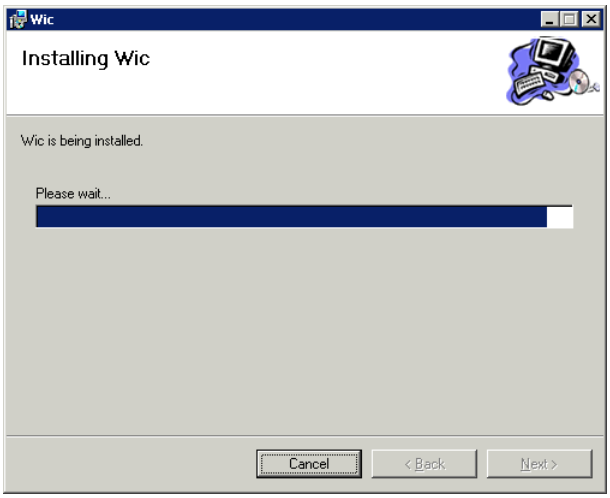

Figure 5-6 – Installing WIC Screen

The *Installing WIC* screen of the *WIC Setup Wizard* displays.

16. Click **Next**.

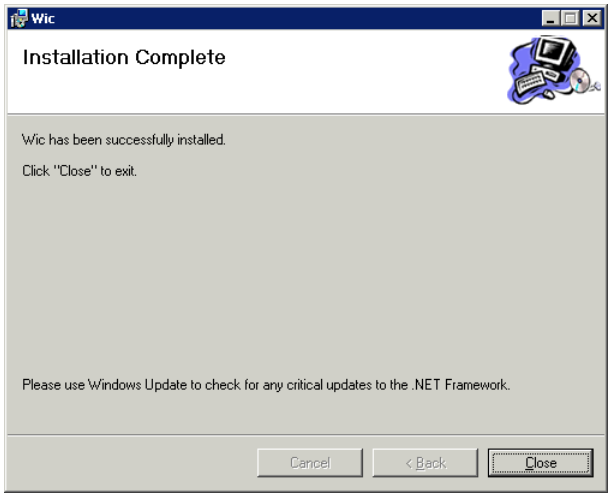

Figure 5-7 – Installation Complete Screen

The *Installation Complete* screen of the *WIC Setup Wizard* displays.

17. Click **Close**.

5.3. Vendor Online Application Updates

Complete the steps outlined in the following subsections to apply updates to the *Vendor Online Application* module.

5.3.1. Install MSI Package

Complete the following steps to install the MSI package:

1. Save the *OnlineApplicationSetup.msi* file to the Web Server.

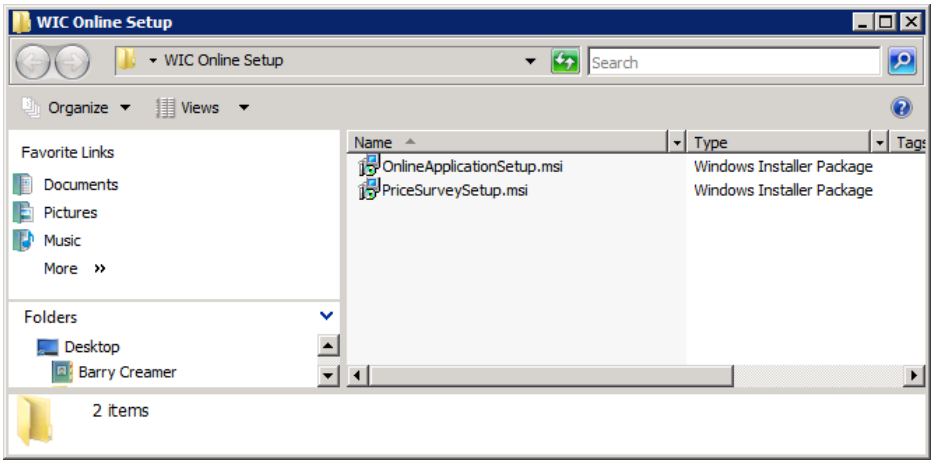

Figure 5-8 – Windows® Explorer Screen

2. Double-click the *OnlineApplicationSetup.msi* file.

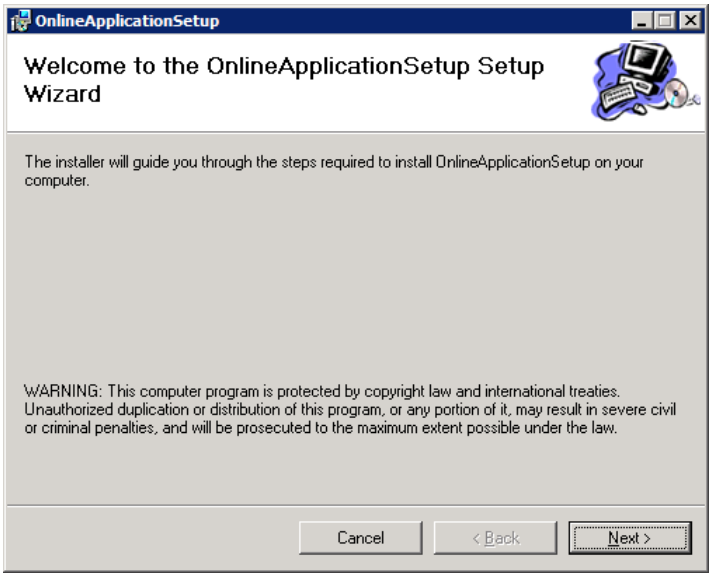

Figure 5-9 – Welcome Screen of the InstallShield Wizard for the Vendor Online Application

3. Click **Next**.

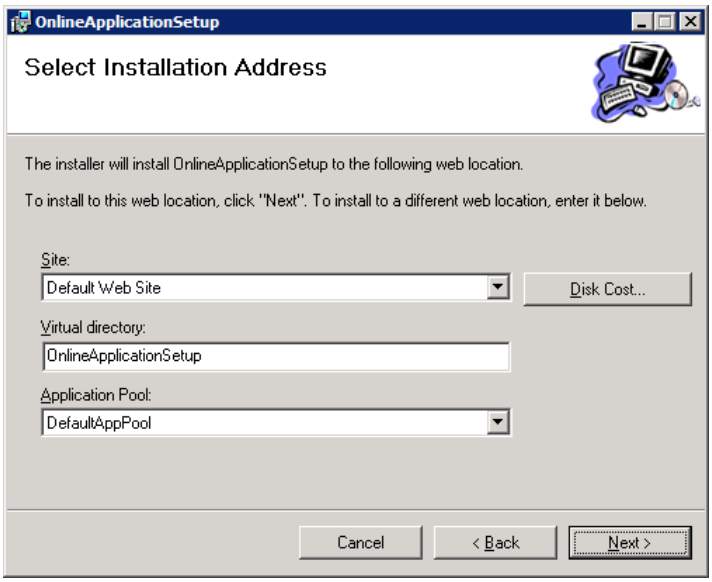

Figure 5-10 – Installation Address Screen of the InstallShield Wizard for the Vendor Online Application

4. Click **Next**.

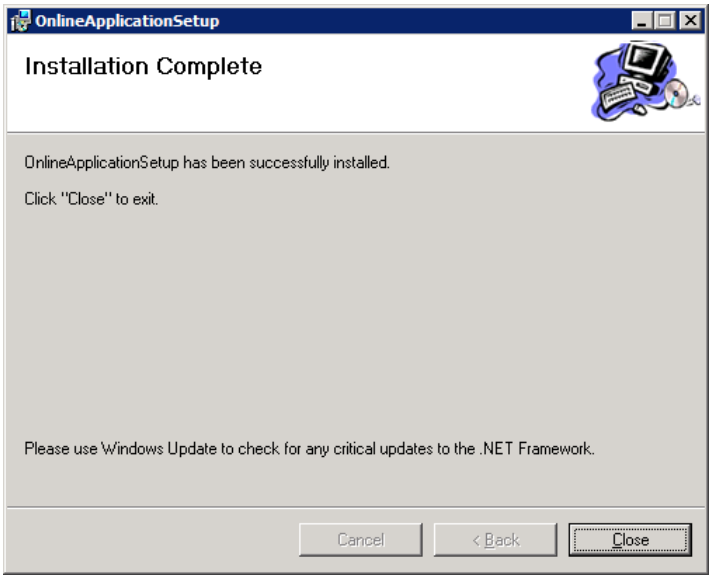

Figure 5-11 – Installation Complete Screen of the InstallShield Wizard for the Vendor Online Application

5. Click **Close**.

The files install to [drive]*:\inetpub\wwwroot\OnlineApplicationSetup* folder.

5.3.2. Setup the Online Application Folder

Complete the following steps to setup the *Online Application* folder:

1. Open a *Windows® Explorer* screen.
2. Navigate to the folder in which the *OnlineApplicationSetup.msi* was installed.

NOTE: The default location is the *[drive]:\inetpub\wwwroot\OnlineApplicationSetup* folder.

3. Copy the *OnlineApplicationSetup* folder.
4. Navigate to the *[drive]:\WIC\Sites\SiteName* folder.
5. Paste the *OnlineApplicationSetup* folder into the *[drive]:\WIC\Sites\SiteName* folder.

6. Rename the *OnlineApplicationSetup* folder to *OnlineApplication*.

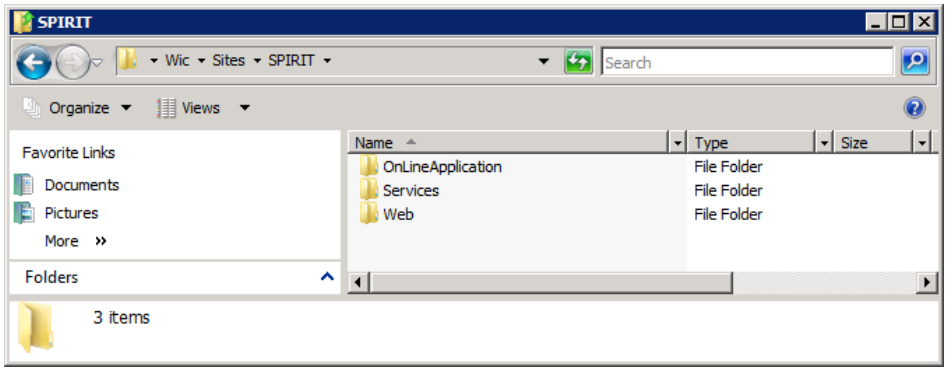

Figure 5-12 – Windows® Explorer Screen

5.4. Vendor Price Survey Updates

Complete the steps outlined in the following subsections to apply updates to the *Vendor Price Survey* module.

5.5. Install MSI Package

Complete the following steps to install the MSI package:

1. Save the *PriceSurveySetup.msi* file to a folder on a hard drive of the Web Server.

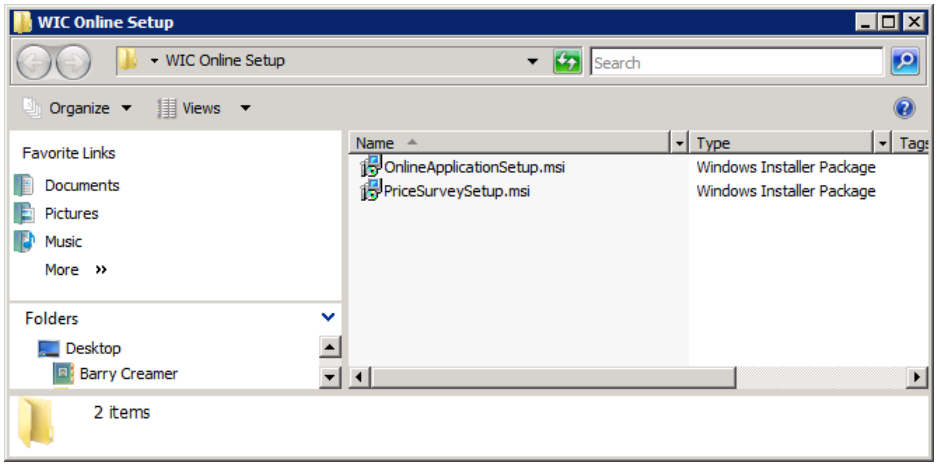

Figure 5-13 – Windows® Explorer Screen

2. Double-click the *PriceSurveySetup.msi* file.

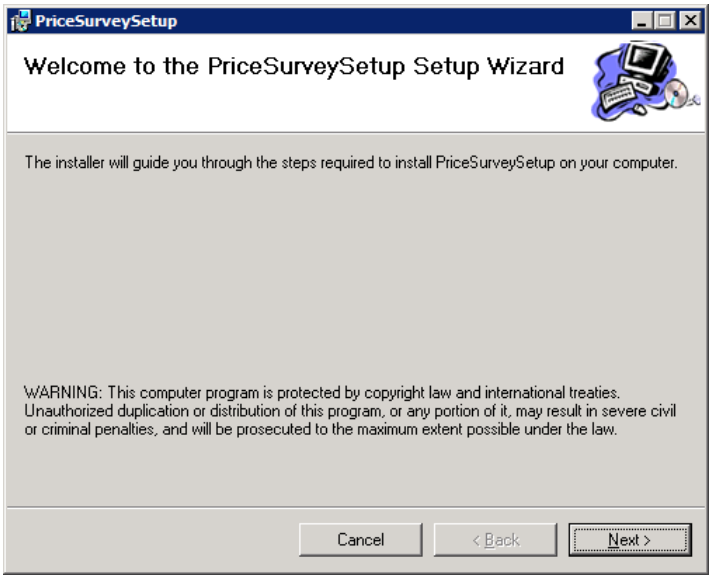

Figure 5-14 – Welcome Screen of the InstallShield Wizard for the Vendor Price Survey

3. Click **Next**.

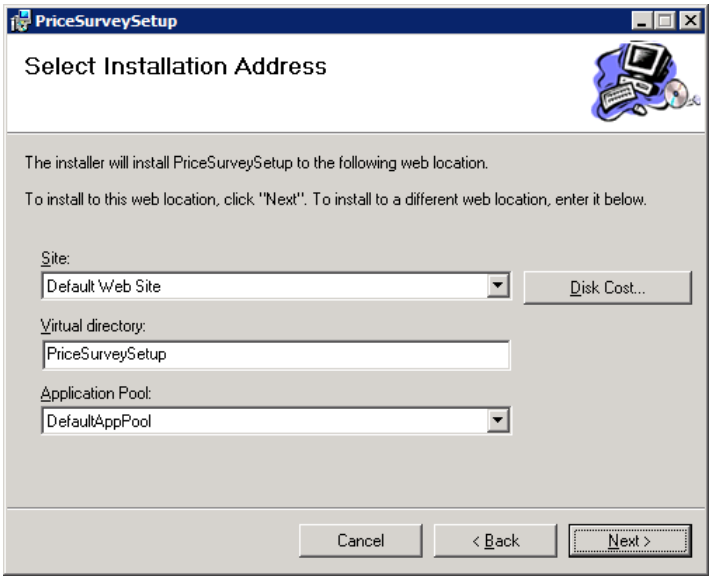

Figure 5-15 – Installation Address Screen of the InstallShield Wizard for the Vendor Price Survey

4. Click **Next**.

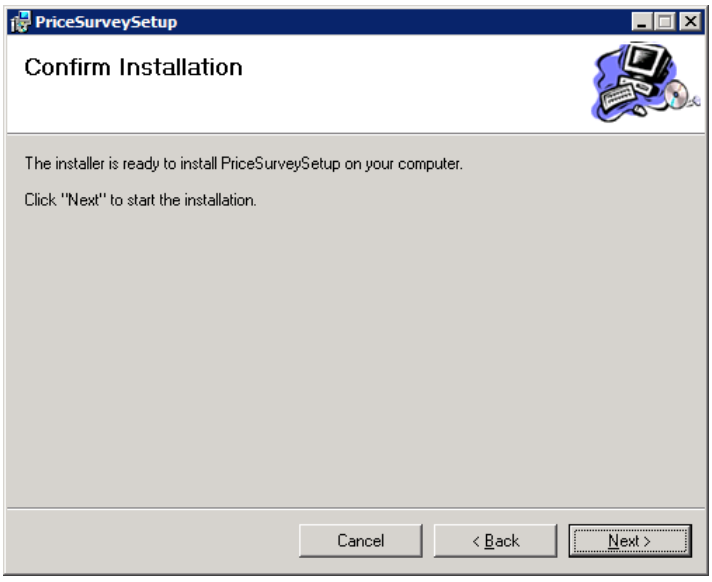

Figure 5-16 – Confirm Installation Screen of the InstallShield Wizard for the Vendor Price Survey

5. Click **Next**.

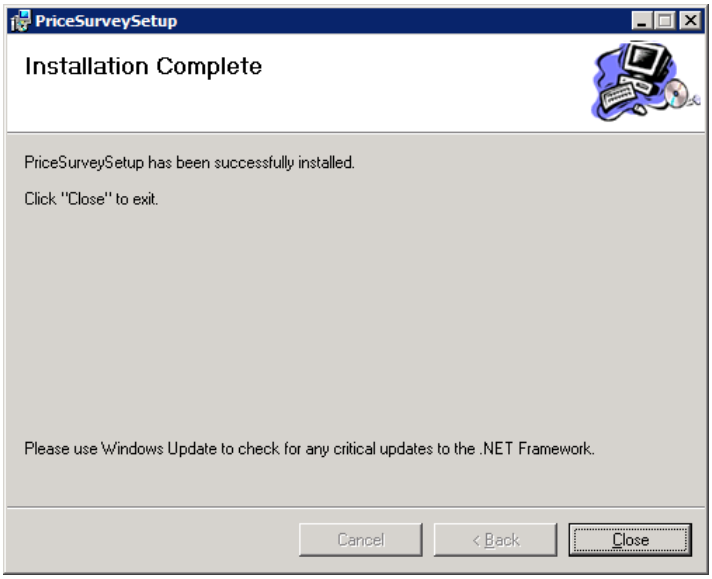

Figure 5-17 – Installation Complete Screen of the InstallShield Wizard for the Vendor Price Survey

6. Click **Close**.

The files install to the *[drive]:\inetpub\wwwroot\PriceSurveySetup* folder.

5.6. Setup the Price Survey Folder

Complete the following steps to setup the *Price Survey* folder:

1. Open a *Windows® Explorer* screen.
2. Navigate to the folder in which the *PriceSurveySetup.msi* was installed.

NOTE: The default location is the *[drive]:\inetpub\wwwroot\PriceSurveySetup* folder.

3. Copy the *PriceSurveySetup* folder.
4. Navigate to the *[drive]:\WIC\Sites\SiteName* folder.
5. Paste the *PriceSurveySetup* folder into the *[drive]:\WIC\Sites\SiteName* folder.
6. Rename the *PriceSurveySetup* folder to be *PriceSurvey*.

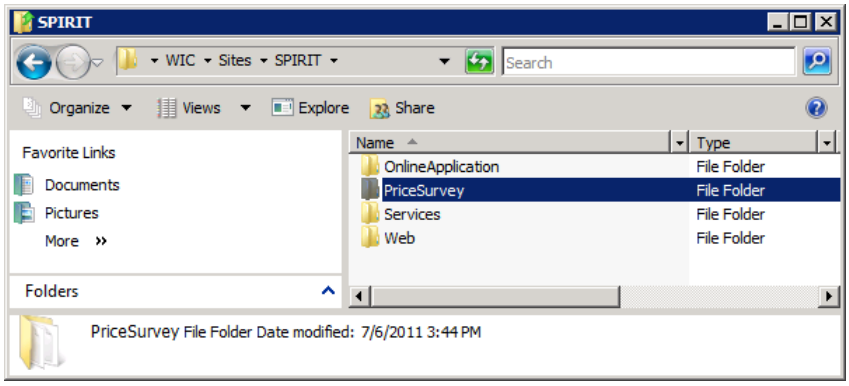

Figure 5-18 – Windows® Explorer Screen

6. USER ACCESS

Access to the SPIRIT WIC System, functional areas within the system, and specific features within each functional area are controlled by user profiles and the roles they are assigned. User profiles, roles, and security settings are managed using the **Security** panel of the Management Console module. Detailed information about the **Security** panel feature is located in the *SPIRIT Security Features and Configuration Plan* document and the *Security Group* section in the *Management Console DFDD*.

7. SYSTEM MAINTENANCE

Maintenance of the SPIRIT environment should be incorporated into existing maintenance practices and procedures. Recommendations that follow are specific to the SPIRIT WIC System.

7.1. Recommended Daily Server Maintenance

The hosting Information Technology (IT) department should perform daily Web Server maintenance to include at a minimum:

- Create a scheduled task to recycle the application pool on the Web Server every night.

7.2. Recommended Monthly Server Maintenance

The hosting Information Technology (IT) department should perform monthly server maintenance to include at a minimum:

- Installation of security patches and hot fixes
- Regularly scheduled system reboot
- Test fail-over
- Clean and recover disk space
    - Remove old IIS logs located in C:\WINDOWS\system32\LogFiles
    - Defrag the server hard drive

In case of emergency updates to the SPIRIT WIC System, the hosting Information Technology (IT) department should communicate the schedule and duration of expected updates to ensure minimal impact to the end user.

7.3. Database Server Maintenance

The hosting Information Technology (IT) department should maintain up-to-date database statistics and defrag indexes.

Once the SPIRIT database environment is setup, a member of the implementation DBA team should work with the hosting Information Technology (IT) department's DBA to create a Data Transformation Services (DTS) maintenance package. It is recommended that a DTS maintenance package be run in production at a minimum of once per week from the SQL Server scheduler during non-business hours. It may be run daily if activity warrants. In addition, the DTS maintenance package should be run just before initiating the SPIRIT End of Month (EOM) process each month.

8. SYSTEM BACKUP

Backup of the SPIRIT environment should be incorporated into the hosting Information Technology (IT) department's existing backup practices and procedures. The recommendations that follow are specific to the SPIRIT WIC System, but may not be the only backup procedures that the Hosting Data Center implements.

8.1. Recommended Server Backup Schedule

Server back-ups should occur as follows:

- Daily Incremental Backups
  - Monday -Thursday after business hours
- Weekly Full Backups
  - Friday after business hours
  - If the system is accessed during weekend hours, an additional backup may be necessary after weekend business hours.
- Month End Full Backup
  - After production End of Month processing
- Yearly Full Backup
  - After production End of Month processing for the last month in the fiscal year
- Bi-Annual PC20xx Report Full Backup
  - After business hours on April 30th according to FNS requirements

8.2. Retention Times

Retention times for all backups are based on state policies and practices.

- Recommendation: Retain an onsite backup of the biennial PC20xx database until completion of the review period.

8.3. General SQL Server Restore (sometimes referred to as Refresh)

The following steps provide general instructions for restoring or refreshing an existing SPIRIT database.

Confirm location of backup is accessible from the machine used to perform the refresh. If necessary, copy the backup file to the appropriate drive on the server (e.g., D:\ drive).

NOTE: If copying from a compressed file, extract the backup file to the accessible drive on the server.

1. Open *MS SQL Server Management Studio*.
2. On the *Connect to Server* screen, complete the following steps:
    a. Select the **Server** name.
    b. Type the appropriate **Authentication** method.
    c. Type the **Login**.
    d. Type the **Password**.
    e. Click **Connect**.
3. Select **New Query**.
4. In the **Database** drop-down menu on the toolbar, select the applicable database.
5. Copy the SQL script in Figure 8-1, paste it into a query, and modify it to use the applicable *DatabaseName*, *PathToBackupFile*, *PathToData*, and *PathToLog* as follows:
    - ALTER DATABASE and RESTORE DATABASE values are the target database being restored with new data.
    - FROM DISK value is the source file being used to restore the target database.
    - WITH MOVE 'Data' value is the logical file name of the source data file being moved to the target data file
    - MOVE 'Log' value is the logical file name of the source log file being moved to the target log file.

```
USE MASTER
GO
ALTER DATABASE <DatabaseName>
SET SINGLE_USER
WITH ROLLBACK IMMEDIATE
GO
RESTORE DATABASE <DatabaseName>
        FROM DISK = '<PathToBackupFile>'
        WITH MOVE 'Data' TO '<PathToData>',
        MOVE 'Log' TO '<PathToLog>'
GO
ALTER DATABASE <DatabaseName>
SET MULTI_USER
GO
```

Figure 8-1 – SQL Script 1 (To Restore the Database)

6. Execute the query.
7. Review MESSAGES fully to confirm that the script was executed successfully.
8. Open another query screen and run the following SQL script to de-orphan the SPIRIT User:

```
SP_CHANGE_USERS_LOGIN 'update_one', 'spirit', 'spirit'
GO
SP_CHANGE_USERS_LOGIN 'update_one', 'spiritweb',
'spiritweb'
GO
```

Figure 8-2 – SQL Script 2 (To De-orphan the SPIRIT User)

NOTE: If you are unable to log into the SPIRIT system after a refresh, the de-orphan SQL script may need to be run.

9. Exit *MS SQL Server Management Studio*.

9. SYSTEM RECOVERY

The hosting Information Technology (IT) department should maintain a list of SPIRIT equipment including the machine names, IP addresses, environment description, relevant Web service addresses, and maintenance/reboot schedule.

9.1. Individual Server Reboot

9.1.1. Web Servers

If the Web Servers are load balanced, the reboot process for each Web Server can only be initiated after the previous Web Server fully completes the reboot process. For example, the following Web Servers are setup for load balancing:

- SPIRITWEB1 - This server is set to load balance with SPIRITWEB2 and SPIRITWEB3
- SPIRITWEB2 - This server is set to load balance with SPIRITWEB1 and SPIRITWEB3
- SPIRITWEB3 - This server is set to load balance with SPIRITWEB1 and SPIRITWEB2

9.1.2. Database Server

If there are multiple Database Servers clustered, the Database Servers should be set to fail over. If one Database Server has been shut off, end users should not notice anything. If both database boxes lost power or connection at the same time, it would bring the entire system down. When rebooting the Database Servers, reboot one at a time. For example, the following Database Servers are setup to fail over:

- SPIRITDB01 - Database Server (1) set to fail over.
- SPIRITDB02 - Database Server (2) set to fail over.

If SPIRITDB01 is currently being used and a total reboot is needed, SPIRITDB02 would be rebooted first. After it has fully completed rebooting, SPIRITDB01 can be used and SPIRITDB02 can be rebooted.

9.1.3. Application Server

The Application Server (End of Day/End of Month server) can be rebooted at any time as long as the End of Day (EOD) process or End of Month (EOM) process is not running.

9.1.4. FTP Server

The FTP Server can be rebooted at any time as long as a transfer is not in progress.

9.2. Entire System Shutdown

To take all servers offline, complete the following steps in order:

1. Shut down each Database Server in sequence, waiting to shut down the next server in the sequence until the previous server is offline.

2. Shut down each Web Server in sequence, waiting to shut down the next server in the sequence until the previous server is offline.

3. Shut down the application (EOD/EOM) server.

9.3. Entire System Startup

To bring all severs back online, complete the following steps in order:

1. Start each Database Server in sequence, waiting to start the next server in the sequence until the previous server is online.

2. Start each Web Server in sequence, waiting to start the next server in the sequence until the previous server is online.

3. Start the Application Server (EOD/EOM server).

9.4. Windows Server 2008 Troubleshooting

SPIRIT versions 2.0 or greater require Microsoft® Windows Server 2008 (Web Edition is recommended). The following are links to Microsoft® TechNet for information relating to Microsoft® Windows Server 2008.

- Windows Server 2008:
  http://technet.microsoft.com/en-us/library/dd349801(WS.10).aspx

- Backup and Recovery Overview for Windows Server 2008
  http://technet.microsoft.com/en-us/library/cc770593(WS.10).aspx

10.SITE OPERATIONS OVERVIEW

10.1. System Requirements

SPIRIT is best viewed by client workstations utilizing Internet Explorer 5.5 or greater and is compatible with Windows XP and Windows 7 when using SPIRIT software version 2.17.07 or greater.

10.1.1. Maintenance Best Practices

To maintain optimal performance take the following steps:

1. Set Windows Update to automatically download and install patches every night.
2. Defrag the hard disk every week using the Disk Defragmenter utility.
    a. Click Start on the Windows task bar, point to All Programs, then Accessories, then System Tools and click Disk Defragmenter. The Disk Defragmenter screen displays.
    b. On the Disk Defragmenter screen, select the hard drive to be defragmented as necessary (the first hard drive in the list is selected by default), and click the Defragment button.
3. Schedule an anti-virus program to run a full scan nightly.
4. Install an anti-spyware program if one is not included as part of the Antivirus solution and schedule it to run a full scan nightly.

10.2. Communication Requirements

Below is a list of recommended connections based on the number of simultaneous users per site.

Number of Users	ISP Service
1 to 3 users	Low- to mid-speed DSL line with an estimated speed of 128 kbps to 384 kbps Low- to mid-speed cable modem with an estimated speed of 128 kbps to 384 kbps
4 to 7 users	Mid- to high-speed DSL line with an estimated speed of 384 kbps to 1.5 mbps Mid- to high-speed cable modem with an estimated speed of 384 kbps to 1.5 mbps Fractional T-1 line with an estimated speed of 384 kbps to 1.5 mbps
8 to 24	High-speed DSL line with an estimated speed of 768 kbps to greater than 1.5 mbps High-speed cable modem with an estimated speed of 768 kbps to greater than 1.5 mbps Fractional or full T-1 line with an estimated speed of 768 kbps to greater than 1.5 mbps
25+	High-speed capability dependent on the number of users.

Figure 10-1 – Table of SPIRIT Communications Requirements

11.MAIL MERGE TEMPLATES

SPIRIT includes generic letters and notices to utilize as templates for printed communication with vendors and participants. The vendor and participant letters are generated with Microsoft® Word templates utilizing mail merge fields to enter vendor and participant specific data. Microsoft® Word is required on client machines to update and generate the SPIRIT templates.

11.1. Maintaining Mail Merge Templates

NOTE: Maintain a master copy of all SPIRIT templates backed up to a CD or a backup directory on a network server.

Templates are stored on the SPIRIT Web Server(s):

…\WIC\ClientUpdate\Update

When the user logs into SPIRIT, the system compares the dates and file sizes of the templates on the user machine with the template files on the Web Server in the *…WIC\ClientUpdate\Update* folder. If the user's files are older than those on the Web Server are, SPIRIT pushes the Web Server templates to the user's machine using the paths by the *LocalFileName* tags in the in the *UpdateManifest.xml*.

Windows XP Setup

For client installs Release 2.17 or later, the SPIRIT templates are stored in the following directories on each local machine:

C:\Documents and Settings\All Users\CSC\WIC\Templates

C:\Documents and Settings\All Users\CSC\WIC\TemplatesBase

The SPIRIT WIC System uses the templates stored in the *C:\Documents and Settings\All Users\CSC\WIC\Templates* folder when printing mail merge documents.

Windows 7 Setup

For client installs Release 2.17 or later, the SPIRIT templates are stored in the following directories on each local machine:

C:\Users\Public\CSC\WIC\Templates

C:\Users\Public\CSC\WIC\TemplatesBase

The SPIRIT WIC System uses the templates stored in the *C:\Users\Public\CSC\WIC\Templates* folder when printing mail merge documents.

11.1.1. Customizing SPIRIT Templates

Create a directory on a local machine and copy all template documents from *…\WIC\ClientUpdate\Update* to this local directory. For example, create a folder named *Customized SPIRIT Letters* and place the folder on the *C* drive (*[drive]:Customized SPIRIT Letters*). The copies in this folder are referred to as the customized templates. From this point forward, they are modified with information specific to the WIC program such as contact information or an approved header using Microsoft® Word.

NOTE: Do not change template file names. SPIRIT utilizes the file name to locate the correct template when printing mail merge documents. An error will occur in SPIRIT if the names of the files are changed.

11.1.2. Customizing Templates – Example

Open a template in the *Templates* folder in Microsoft® Word. The content can be edited, but mail merge fields must be left intact. Mail merge fields are text framed between double angle brackets ("<<" and ">>"). Neither the brackets nor the text between them should be modified. SPIRIT inserts specific participant or vendor information into them. Any modifications render them unrecognizable to SPIRIT and break the template.

In the example template, the header information illustrated in Figure 11-1 can be replaced with a customized letterhead.

Figure 11-1 – Example Header

In the example template, the body of the document below the header, includes the following information:

«LetterDate»

«Salutation» «FirstName» «LastName», «Title»
«Vendor»
«AddressLine1»
«AddressLine2»
«City», «ST» «ZIPCode»

SUBJECT: Vendor Application - Due Date Postmarked by April 15, 2000

Dear «Salutation» «LastName»:

The State Supplemental Nutrition Program for WIC is now accepting applications from retail food stores and pharmacies …

Figure 11-2 – Example Body

The subject line and the body of the letter can be changed.

IMPORTANT: Mail merge fields are text framed between double angle brackets ("<<" and ">>"). Neither the brackets nor the text between them should be modified.

11.2. Testing Templates Folder on Local Computer

Once a template has been modified, it should be tested using the associated system module on the local machine before updating the Web Server. Copy the modified template to the *…\CSC\WIC\Templates* directory.

11.2.1. Vendor Templates

To test a Vendor template, log into the Vendor Management module. The template being tested determines where in the module to access the letter.

For information about printing a specific letter, refer to the *System Outputs* chapter of the SPIRIT WIC DFDD.

11.2.2. Clinic Templates

To test a Clinic template, log into the Clinic module. The template being tested determines where in the module to access the letter.

For information about printing a specific letter, refer to the *System Outputs* chapter of the SPIRIT WIC DFDD.

11.3. Deploying Customized Templates to the Web Server(s)

11.3.1. Deploying Templates

The final template versions must be deployed to ALL SPIRIT Web Servers to ensure all users generate vendor and or participant documents using the approved customized templates.

1. Copy the customized template to the *\WIC\ClientUpdate\Update* folder on the Web Server. (Replace existing files as necessary.)

2. Modify the *UpdateManifest.xml* file to ensure the customized templates are downloaded to the *Template* folder on the client computers.

    a. Search for each template by name and update the following information with the information from the customized template file:

        i. Replace the *Size* value with the customized template file's size in bytes. (e.g., "<Size>22016</Size>")

        ii. Update the *LocalFileName* value to replace *TemplatesBase* with *Templates*. (e.g. "<LocalFileName>Templates\CertNotice.doc</LocalFileName>")

        iii. Replace the *LastUpdatedOn* value with the customized template file's modified date. (e.g., "<LastUpdatedOn>2011-07-06T14:40:38-05:00</LastUpdatedOn>")

IMPORTANT: Ensure the *LocalFileName* value in the *UpdateManifest.xml* identifies the *Templates* folder in the file path. (e.g., <LocalFileName>Templates\CertNotice.doc</LocalFileName>)

11.3.2. New Templates

When new template options are added to the SPIRIT WIC System the *UpdateManifest.xml* needs to be updated so the new template will be available on the client workstations.

1. Search for the new template by name and update the following information with the information from the customized template file:

    a. Replace the *Size* value with the customized template file's size in bytes:
    (e.g., "<Size>22016</Size>")

    b. Update the *LocalFileName* value to replace *TemplatesBase* with *Templates*.
    (e.g. "<LocalFileName>Templates\CertNotice.doc</LocalFileName>")

    c. Replace the *LastUpdatedOn* value with the customized template file's modified date:
    (e.g., "<LastUpdatedOn>2011-07-06T14:40:38-05:00</LastUpdatedOn>")

IMPORTANT: Ensure the *LocalFileName* value in the *UpdateManifest.xml* identifies the *Templates* folder in the file path. (e.g., <LocalFileName>Templates\CertNotice.doc</LocalFileName>)

12.END OF DAY (EOD)

The following information is provided for System Administration purposes with the End of Day (EOD) processes.

12.1. Daily Maintenance

Review the End of Day (EOD) logs each day through the Scheduled Job Administration module for potential errors that may need to be resolved before EOD can process for the following day. For information about accessing End of Day log entries, refer to the *Viewing End of Day Log Entries and/or Purging Log Histories* section in the *Training Scenarios* chapter of the *Scheduled Job Administration* DFDD.

As part of a banking contract, state office personnel may have access to a Web site hosted by the banking contractor to monitor daily banking transactions. This aids in the resolution of errors that may occur during the paid file process of EOD.

12.2. Desktop Scheduling

End of Day (EOD) is scheduled to update the *ScheduledJobControl* table using *WIC End of Day Administration* accessible in the *Scheduled Job Administration* module. *WIC End of Day Administration* also provides for removing EOD from the schedule. For information about using the *Scheduled Job Administration* module, refer to the *WIC End of Day Administration* section in the *Scheduled Job Administration* DFDD.

NOTE: Scheduling EOD in the *Scheduled Job Administration* module does not initiate the EOD process.

EOD can be run manually, or it can be scheduled to run automatically using the Windows® *Task Scheduler*. When EOD is run, it first confirms that it is scheduled in the *ScheduledJobControl* table before proceeding. If the table indicates it is scheduled, processing continues; otherwise, EOD immediately terminates. This feature provides for the flexibility of keeping EOD on an automated scheduler to run each day without daily user interaction.

For information about using the Windows® *Task Scheduler*, refer to the *Adding End of Day to the Windows Task Scheduler* section of the *Training Scenarios* chapter in the *Scheduled Job Administration* DFDD.

12.3. File Management

The *File Management* function of the *Scheduled Job Administration* module allows the user to remove currently executing records remaining after the End of Day process completes or the Application Server has had an abnormal shutdown while the processes were running.

12.4. End of Day Processing

End of Day (EOD) processing consists of required and optional processes and reports. State business rules control which processes and reports are active. Only active processes are executed, and only active reports are generated.

When End of Day (EOD) process is started, it establishes a connection with the database, which gives it access to the database tables. All informative and error messages are saved to the *ScheduledJobLog* table.

The tasks executed during EOD are determined by the values selected for related state business rules in the *StateBusinessRules* table. For information about EOD processes and the business rules that affect them, refer to the *End of Day Processes* chapter of the *Scheduled Job Administration* DFDD.

End of Day (EOD) files created by SPIRIT are stored on the Application Server. Third party files (i.e., bank paid files) sent for EOD to process must be stored on the Application Server as well. The following file structure is a sample for the storage of EOD files.

- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD

With the following subfolders:

- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Banking
    - Individual daily issuance files and paid files from the bank that have not yet been processed by EOD should be stored in the *[drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Banking* folder and not within one of its subfolders.
- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Banking\CSC
- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Banking\SentFiles
- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Reports\<yyyy/mm/dd>\Optional DD Reports\
- [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Vendor

12.4.1. EOD FTP

SPIRIT functionality includes FTP communications for sending SPIRIT generated banking files to and picking files up from an external location using Windows FTP process. If the banking contractor supports FTP communications, SPIRIT can be configured to FTP directly to the banking contractor. To use the FTP process, the Value for the *EOD_SENDRECEIVEEXTERNALFILES* state business rule must be set to Y.

12.4.2. Archiving EOD Files

Based on state retention policy, files may need to be archived.

NOTE: The file naming convention for the SPIRIT issuance file contains a date stamp (MMDD), but it does NOT include the year. If old issuance files are not archived, these files will be overwritten each year. For example, issuance file name for both November 30, 2009 and for November 30, 2010 would be *ISMD1130.txt*. The 2010 file would overwrite the 2009 file.

If the issuance files are not archived the information that is logged is the following:

> "1/1/2012 11:02:45 PM - Send BANKING files encountered an error processing the file [drive]:\WIC\Sites\<state or ITO name>\Data\EOD\Banking\ISXX0101.TXT. Error:Cannot create a file when that file already exists."

This happens because it is trying to move the file from the *\Banking to the \Banking\SentFiles* and the file from the previous year already exists in that folder.

13.END OF MONTH (EOM)

The following information is provided for System Administration purposes with the End of Month (EOM) processes.

13.1. Daily Maintenance

Because the successful scheduling of End of Month (EOM) is closely tied to paid information received daily from the bank, the End of Day (EOD) log files and the bank exceptions should be reviewed daily to ensure timely response to any issues with processing paid data are resolved prior to the next run of EOM. EOD Log files are accessible in the Scheduled Job Administration module and the bank exceptions are located under Financial Management (Journal)/Activities/Bank Exceptions. Daily monitoring and resolution to such issues reduces the amount of time spent at the end of the month. For information about accessing End of Month log entries, refer to the *Viewing End of Month Log Entries and/or Purging Log Histories* section in the *Training Scenarios* chapter of the *Scheduled Job Administration* DFDD.

As part of a banking contract, state office personnel may have access to a Web site hosted by the banking contractor to monitor daily banking transactions. This aids in the resolution of errors that may occur during the paid file process of EOD.

13.2. Monthly Maintenance

Because End of Month (EOM) processing utilizes a large amount of system resources on the Database Server, maintaining up-to-date database statistics is important for the successful and efficient run of End of Month (EOM). In addition, some of the database tables modified during the EOM process do not have consistent activity from month to month and the updating of these tables is particularly sensitive to bad statistics. The DTS maintenance package should be run just before initiating the SPIRIT EOM process.

13.3. Desktop Scheduling

End of Month (EOM) is scheduled to run using *WIC End of Month Administration* accessible in the *Scheduled Job Administration* module. *WIC End of Month Administration* also provides for removing EOM from the schedule and restarting EOM. For information about scheduling EOM tasks, refer to the *WIC End of Month Administration* section in the *Scheduled Job Administration* DFDD.

NOTE: Scheduling EOM in the *Scheduled Job Administration* module does not initiate the EOM process.

13.4. File Management

The *File Management* function of the *Scheduled Job Administration* module allows the user to remove currently executing records remaining after the End of Month process completes or the Application Server has had an abnormal shutdown while the processes were running.

13.5. End of Month Processing

End of Month (EOM) processing consists of required and optional processes and reports. State business rules control which processes and reports are active. Only active processes are executed, and only active reports are generated. When End of Month (EOM) process is started, it establishes a connection with the database, which gives it access to the database tables. All informative and error messages are saved to the *ScheduledJobLog* table.

The tasks executed during EOM are determined by the values selected for related state business rules in the *StateBusinessRules* table. For information about EOM processes and the business rules that affect them, refer to the *End of Month Processing* section of the *End of Month Processes* chapter in the *Scheduled Job Administration* DFDD.

The reports generated by the End of Month process are typically in Adobe Acrobat PDF or Microsoft® Excel format. EOM saves the report files to a folder on the Application Server, which is usually located in the following location:

- [drive]:\WIC\Sites\<state or ITO name>\Data\EOM\Reports

Within this directory, a folder is created for the month being processed. For example,

- [drive]:\WIC\Sites\<state or ITO name>\Data\EOM\Reports**201005**

Within each month's folder, a folder is created for each category of report generated. For information about EOM processes, refer to the End of Month Processing section of the *End of Month Processes* chapter in the *Scheduled Job Administration* DFDD.

13.5.1. Archiving EOM Files

Based on state retention policy, files may need to be archived annually. This can be accomplished by creating a folder named for the year of the files being archived within the [drive]:\WIC\Sites\<state or ITO name>\Data\EOM folder and moving files to be archived into this folder.